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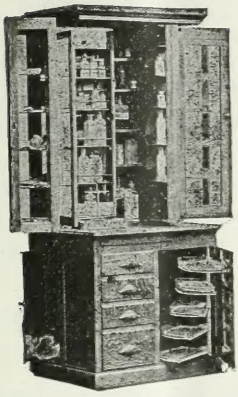

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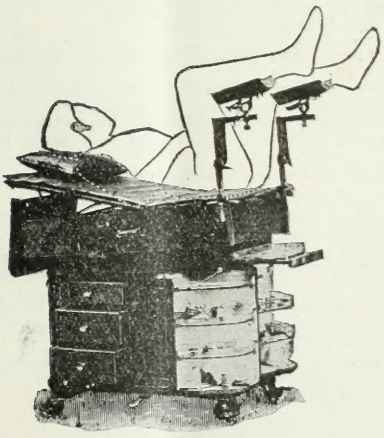

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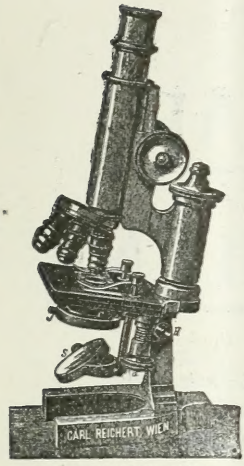

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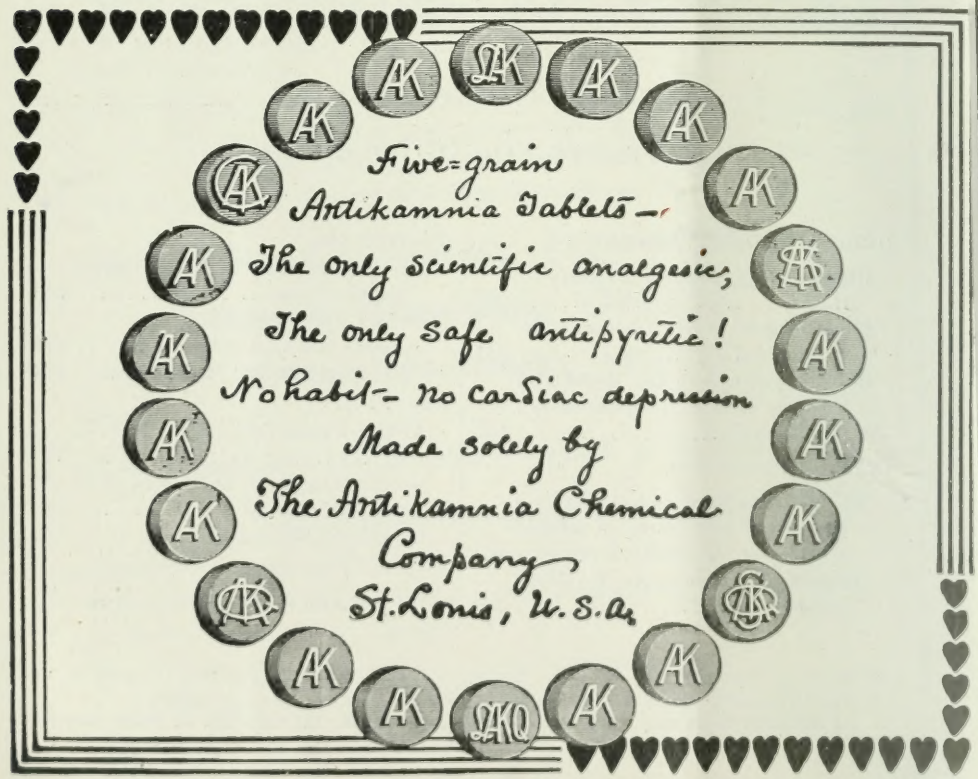

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VOL. XIII. HALIFAX, N. S., OCTOBER, 1900. No. 10.

Original Communications.

DISEASES OF THE MASTOID PROCESS.*

By G. H. Cox, M. D., New Glasgow, N. S.

The necessary limits as to time allow me to give but a sketch of the etiology, pathology and treatment of diseases of the mastoid process as at present understood and practised, and while omitting details, to dwell only on the points which, in my own experience, have proven of practical importance.

Anatomy. We will first briefly sketch the points of anatomical interest. At the inner end of the external meatus, roughly $1\frac{1}{4}$ inches from the outside world, lies the drum-head, completely shutting off the tympanic cavity. The attic, or upper story, of this space communicates posteriorly with the mastoid antrum, a cavity of varying size lying in the mastoid process. The structure of the rest of this process varies in different individuals, falling under one of three types, the pneumatic, diploic and sclerotic.

In the pneumatic, numerous large air-spaces are distributed throughout its mass, many of which communicate with the antrum and with each other, and are lined with the same mucous membrane as the antrum and tympanum. In the diploic and sclerotic varieties the entire process is composed, in the one case of cancellous tissue, in the other of ivory-like bone. The antrum is constant. A mixture of these types is commonly found.

* Read at meeting of Medical Society of Nova Scotia, Amherst, July 4th, 1900.

Surgical Relations:

(1) Superiorly the antrum and tympanum are separated from the middle fossa of the skull by a very thin plate of bone, sometimes deficient in part, while the posterior mastoid cells are in close relation to the posterior fossa.

(2) The lateral sinus which runs in a groove on the inner surface of the process, lies in 86% of cases behind a line drawn vertically through the middle of the process. In the remainder it transgresses this limit anteriorly and may even come so far forward as to prevent air reaching the antrum in the usual way. In operating, great care must be used to avoid it by keeping as close as possible to the wall of the meatus.

(3) The facial nerve in its course through the temporal bone runs within the inner wall of the tympanum until it reaches the posterior wall when it turns downward and obliquely outward to escape by the stylo-mastoid foramen. The nerve may thus be injured in curetting the middle ear or in chiselling the posterior wall of the meatus. In the latter procedure the lower part of the wall at its inner end must be left intact.

(4.) In cases of extensive interference we must also remember the location of the external and horizontal semi-circular canals, the cochlea and the ossicles.

(5.) The exact location of the antrum itself is important. A safe limit to the upper edge of an opening into the antrum is the horizontal tangent to the upper edge of the meatus. If we go higher we are apt to enter the middle fossa. The triangle formed by this line above, by the vertical tangent behind and by the upper posterior quadrant of the meatal orifice, marks the situation of the antrum. It lies at a depth not exceeding three-quarters of an inch, and seldom less than one half inch. The direction of our opening should be nearly parallel to that of the meatus, inward and forward. For convenience in working, the opening should be larger at first, say of the size and shape of the meatus, narrowing as we proceed in.

The above description applies to the adult. At birth the process is poorly developed, the antrum being the only cell and lying very near the surface.

Diseases of the Mastoid Process.—Clinically we may consider mastoiditis as either secondary to (1) acute, or to (2) chronic otitis media; or as occurring independently of middle ear disease. The latter so-called primary form is uncommon. We shall first consider it briefly.

Primary Mastoiditis.—It may involve either the periosteum primarily, when it is known as external mastoiditis, or may begin in the cells. Causes responsible are cold, trauma, tuberculosis, syphilis and extension of inflammation as in furunculosis of the canal. We must always bear in mind the frequency with which furunculosis of the meatus is accompanied by œdema and even redness of the parts over the tip of the mastoid and in front of and below the ear. The diagnosis may be a matter of doubt, particularly in such cases as one I recently had, where the patient had formerly had mastoiditis. The diagnosis rests on the presence of furuncles in the canal, and the fact that while manipulation of the moveable parts causes suffering, even strong pressure carefully applied to the mastoid itself without moving the ear is painless.

The great majority of cases of mastoiditis follow middle ear inflammation. We shall first consider those cases which occur in the course of *acute otitis media*. The etiology is primarily that of the latter disease, namely acute infectious diseases, especially influenza, scarlet fever and measles, exposure to wet and cold, the entrance of solutions into the ear from the nasal douche, operations about the nose and pharynx, and less commonly, typhoid, syphilis, tuberculosis, diphtheria and tonsillitis. Influenza is a prolific cause and the course of cases complicating it is usually rapid and severe. It has been found that in most cases of acute otitis media, the mastoid mucous membrane is involved to some extent: and this would seem inevitable. Indeed in serious cases of acute otitis media we often get marked symptoms of mastoid irritation. It is probable that it is in cases where the openings into the antrum and cells are small and easily closed by swelling of the mucous membrane, that abscess formation and caries take place. Spontaneous evacuation may take place either through (1) the outer wall of the process, or more rarely (2) through the meatal wall, or (3) into the digastric fossa, or the middle or posterior cranial fossa.

The course of a typical case is as follows: During an attack of acute otitis media, pain develops in the bone behind the ear. It is radiating in character and usually severe. The temperature is raised and may reach 105°, though usually not over 102°. The pain and temperature afford no measure of the extent of the disease, and both may be slight where half the process has been destroyed. The discharge of pus from the middle ear is often profuse, but not always. The presence of external swelling, œdema or fluctuation must not be expected. Indeed these

are uncommon except in children, and in the late stages of cases where spontaneous perforation has occurred.

Two signs, however, occur which are characteristic of mastoid involvement and which when present are diagnostic.

(1) First, tenderness upon pressure and percussion over the antrum or tip of the mastoid. In ascertaining the presence of this sign we must use the precautions already spoken of in connection with furunculosis. Taking care not to move the auricle or meatus, we press firmly with the thumb over the regions mentioned, comparing the effects with those of similar pressure on the opposite healthy process.

(2) The second sign, namely a bulging or sagging of the postero-superior wall of the meatus at its innermost extremity, is the most characteristic sign of the disease. It is boggy and tender to the touch and may be considered as absolutely indicative of pus in the mastoid.

A third sign of value frequently found in these cases is a bulging of the postero-superior quadrant of the membrana tympani.

As for those cases of mastoiditis that occur with *chronic suppurative otitis media* we have here also just as in acute otitis media, in most cases, some involvement of the lining of the antrum and cells. When this involvement progresses from mere swelling and hypertrophy of the mucous membrane to the formation of fungoid granulations, pus-retention, caries and necrosis, we have to deal with a most serious condition of affairs. No chronic suppurating ear is free from this risk. The disease may assert itself with the outbreak of severe symptoms of acute mastoiditis in no way different from the type already described. But very often they remain latent, and we are often surprised at the extent of local lesions wholly incommensurate with the slight subjective symptoms complained of. For example, in a case recently seen, the meatus, tympanum and antrum were completely blocked with granulations and polypi, the ossicles destroyed and the bony parts carious in every direction, in a patient who, though he confessed his ear had run for fifteen years, said it never bothered him except a little during the past winter.

The diagnosis in these cases rests on much the same combination of signs as the acute form, but is often of considerable difficulty. It is best, however, to err on the positive side in a case of any seriousness, since fatal complications may occur at any moment and the operation of exploring the antrum is not dangerous to life.

As for the intercranial complications of mastoiditis, the limits of this paper prevent me from dwelling on their special symptomatology and treatment. I can only name them. They are (1) sinus thrombosis, (2) extra-dural abscess, (3) diffuse purulent lepto-meningitis, (4) abscess of the cerebrum or cerebellum.

Treatment.—In the acute form when the case is seen early, abortive treatment should be tried. A free incision should be made into the membrana tympani, the canal syringed copiously with solution of bichloride of mercury, 1-3000, and leeches natural or artificial applied to the process. Most important of all is the application of cold to the mastoid by means of a small ice-bag or the cold coil. In whatever form, cold should be kept applied continuously to the whole mastoid surface. These measures will often abort the attack in its early stages. The continued use of morphine and the application of counter-irritants should be avoided, since they hinder the diagnosis. If at the end of 24, or at the very most, 48 hours, the symptoms do not abate, or if the formation of abscess is unmistakable, we should operate at once. The usual preparations for an aseptic operation should be employed, and with care, since we may not know how far we may have to go. The hair should be shaved for two inches about the ear, the parts thoroughly cleansed, especially the meatus, which should then be plugged. The primary incision should run one-quarter of an inch behind the auricle from the tip of the mastoid as high as the upper end of the auricle, and should go clean to the bone. The periosteum is then lifted intact and the bone exposed backward and as far forward as to expose the upper and back margins of the meatus. Bleeding is controlled by one or two clamps and pressure with a gauze pad. Then examine the bone for sinuses. If any exist, follow it up by enlarging with chisel or gouge, employing the probe to ascertain the depth and direction of the excavation. If no sinus exist, I think we should at once make for the antrum. Opinions are divided. While in many acute cases the abscess lies only in the cells and the walls of the antrum itself are not carious, still for many reasons it would seem best to attack the original source of the trouble at once and establish drainage. Indeed it is best to be thorough in all these cases and recovery is more certain, perfect and rapid.

The antrum is to be sought for according to the rules already laid down, using the chisel, gouge and sharp spoon. When we have reached it and laid its outer wall freely open, we proceed to remove every vestige

of carious bone, pus and granulations, freely opening up the cells in every direction. It is well to see that the opening between the antrum and tympanum is clear. The sharp spoon and small curette are to be relied on in the later stages of the operation. The cavity is now irrigated with sterile water, dried with gauze, one or two sutures taken at each end of the skin incision, the cavity packed loosely with iodoform gauze, the meatus lightly plugged with cotton, and a sterile dressing applied and bandaged.

The course of the case is usually very satisfactory, and the after treatment simple. All dressings should be done under the same aseptic precautions as the original operation. We may remove the outside dressing next day, if soaked with blood and serum : but unless pain and high temperature arise, we leave the packing in for three days at least. After this it should be removed every second day, being packed in lightly each time. Irrigation with a little boiled water is advisable if there be much discharge, but usually there is very little and the wound is healed in three to six weeks.

If the lateral sinus or dura be exposed, we should proceed to remove very carefully the carious bone from their vicinity with the fine curette, and pack a small pad of gauze over the exposed parts to protect them until the operation is completed. It will not necessarily complicate recovery. Wounding of the sinus is followed by a profuse welling up of blood, but this is controlled by packing a gauze compress firmly down upon it.

The treatment of chronic necrosis of the mastoid is more complicated and I cannot dwell at any length here on the technique. It is often necessary to expose not only the cells and antrum, but the attic and tympanum proper. To do so we proceed to expose the antrum first, then shelling the cartilaginous meatus out of its bed as far in as we can get, and turning it with the auricle forward out of the way, we cut away the posterior wall of the meatus, leaving only that part which contains the facial nerve. After cutting away the outer wall of the attic, we have converted the meatus, cells, antrum, attic and tympanum into one large cavity and have access to every part of the bone liable to disease.

SEPTIC PROCESS IN EYE DISEASE.*

By G. R. J. Crawford, M. D., St. John, N. B.

If we exclude those conditions of the eye directly due to simple traumatism, those arising from impediments to the normal interchange of fluids and the result of senile degeneration and changes, it may be said that most of the remaining serious eye affections depend upon the presence of pathogenic germs. The scientific investigation and study of those organisms, in latter years, may be said in a sense to have completely revolutionized the science and art of medicine and surgery.

It is, perhaps, less than a quarter of a century since the now world-wide known and honored Sir Joseph Lister first published his investigations upon the nature and cause of wound suppuration.

The conclusion at which he arrived as to the germ theory of infection is now almost universally accepted, and aseptic surgery and antiseptic treatment of disease are now established upon a solid and scientific basis.

It is, I may venture to say, within the memory of many of the gentlemen present, when very little attention was paid to micro-organisms in their relation to the causation of purulency.

The two pairs of staphylococci, the streptococci and other kinds of cocci, if known at all, were little cared for. I can well recall the time, and the facts have come under my own observation, when the results of operations in eye surgery were far from satisfactory, mainly or entirely, I believe, from want of knowledge, or want of attention to the most important and well recognized principle of antisepsis. Those operators performed their work with *unusual* dexterity and skill, and trusted Providence for the rest.

During my student days, one of the greatest surgeons of his time, when speaking of histological research in pathology, was in the habit of repeating the word "micrococci" almost with a sneer, as if the study of those minute organisms amounted to but little else than amusement or pastime, and apparently of little more practical interest in relation to the science of medicine and surgery than the telescopic discovery of a new planet would be to the ordinary day laborer intensely engaged in the struggle for daily bread.

* Read before St. John Medical Society, January 17th, 1900.

Everything is happily now changed. The tentative and empirical in medicine and surgery are rapidly being replaced by the specific and rational. The painstaking investigations of Lister, Pasteur, Koch and others, while productive of great and inestimable results, may be said to have merely acted as a stimulus to others for study and work on the same lines. The discoveries of antitoxin in the treatment of diphtheria, the serum therapy, the bubonic plague, and the inoculation treatment of malignant growths, give promise to surpass those illustrious men in the field which they themselves have opened up.

The microscope and the pathologist are now taking their proper place of precedence in the ever widening field of medical science.

This position of prominence which the pathologist is destined to occupy—I believe, gentlemen, you will all agree with me in stating—is daily becoming practically more important and necessary, because in no other way can we be fully informed, as the various conditions upon which success or failure in our medical or surgical treatment so largely depends.

This leads us to what is more specially the object of this paper, viz., some of the more specific and localized manifestations of the process so well known to the physician and surgeon under the name of "Sepsis"

As is well known, every organ and tissue of the body is more or less open to the access of the germs upon which this condition depends, a condition which though always feared by the general surgeon, much more must be the source of dread to the eye specialist, whose medical and surgical domain is narrowed down to a single organ, and that perhaps the most delicate and important of all.

An extensive suppuration following any surgical operation, while painful, sometimes dangerous to life, always annoying and vexatious: yet in the event of recovery it presents no such disastrous sequelæ, as is but too frequently met with in eye surgery in those cases (fortunately rare), when the sight is lost by an opaque cornea or the eye destroyed by panophthalmitis.

As just referred to, the number of diseases of the eye due to septic infection is relatively very large. Year by year this preponderance is on the increase—a fact due largely to modern methods of investigation and closer study in general and special pathology. The culture experiments and the painstaking work of the microscopist have resulted in a marked decrease in the number of affections hitherto regarded as idiopathic or uncertain in their etiology. There has therefore been a corresponding *gain* in the direction of a definite and fixed pathology, and a consequent advance in the line of rational and scientific treatment.

"The old order giveth place to the new," and although it may be unpleasant to part with old and long cherished ideas, they must, however, give way before the sweeping onward march of modern pathology.

One by one, the so-called idiopathic diseases are being classified and arranged, given a definite and fixed pathology and most of them a name and place among the great family of germ diseases.

Rheumatism, we believe, would be about the last to be taken from the old classification, but recent research seems to have established the probability that this also is a germ disease (*Lancet*, March 9 and 16, '95; Newsholme and Knies, '95).

If this can be proved it will include in the primary iritic group almost all in their etiology as due to micro-organisms.

In our remarks in reference to septic processes occurring in the eye, opening up as it does so wide a field, it will be necessary to limit very much the diseases in which it occurs, perhaps merely to the *single condition* known as wound sepsis. This will be sufficient to include *all* the most important considerations in suppurative diseases, viz., the *source* of the disease germ, *how* it reaches the affected parts, and the aseptic and antiseptic measures to prevent its introduction, and if unfortunately it has gained an entrance, in so far as possible to minimize its baneful effects.

I. First, with regard to the source of the germs.

The conjunctival sac, owing to its situation and exposed position, offers an easy path of entrance for external germs floating in the air. Those germs are thrown in by washing with impure water; they are rubbed in by the use of septic towels, unclean fingers, and in many other ways. The lachrymal passage and sac afford both a hiding place for disease germs and all the conditions favorable to their growth and development.

The eye is also menaced by septic processes extending from diseased conditions of the bones of the adjacent parts—notably those forming the walls of the maxillary sinus.

Of all those different sources of germ supply to this membrane, none is more important from a pathogenic standpoint than that of the lachrymal sac. Here we have a natural culture bed; and as among the various bacteria, normally found in the conjunctival sac, are always a certain proportion harmful or pathogenic in their nature, it is most reasonable to suppose, in diseased conditions, here a most dangerous aggregation of those germs must take place.

Apart from those cases of traumatism when the wound becomes directly and primarily infected by the septic foreign body, there is a long list—inflammations similar in their nature, but having their etiology in diseased conditions of the lachrymal sac. The slightest abrasion of the cornea in those cases will be sufficient to open up a way; infection, and a rapidly spreading suppurative inflammation is the result which in too many cases completely destroys the sight of the affected eye. The same etiology applies in many cases of cataract operations. It is said that conjunctival tuberculosis is often secondary to primary disease of the sac. It is well known that diphtheritic germs extend from the nose by this path, perhaps increased in their virulency by the favoring conditions met with in this resting place by the way.

The germs in the normal conjunctiva have been most carefully studied by many distinguished bacteriologists. While on the perfectly normal membrane, as a rule, few bacteria are found, it has been conclusively proved—and I will refer to this further on—that the apparently healthy conjunctival sac may contain germs, (and they are the exceptional cases which do not,)—even those virulently pathogenic in their nature. The various bacilli found in normal and diseased conjunctivæ must form a very interesting study for the pathologist, and if I possessed even in a measure the facility of many gentlemen around me, I should certainly have been induced to attempt the preparation of some microscopic specimens, bearing upon this branch of pathological investigation.

Gifford, Fick, Hildebrandt, Bernheim, and a host of others, have been working along those lines and the practical results have been of the most valuable kind. They have proved that many organisms, unable to injure the normal conjunctival or corneal tissue on the slightest abrasion or wound are the sources of dangerous infection. Even comparatively harmless organisms, if they gain an entrance to the deeper corneal layers, may give rise to a very severe form of keratitis, more or less damaging or destructive in its character. It is, however, against virulent or pathogenic germs, now so well known, which the physician and surgeon must wage eternal warfare.

At our last meeting a prominent member of our society, has remarked that those germs are the curse ahead of us into the world. They are patiently awaiting the first opportunity of imposing themselves upon our unsuspecting and helpless innocence. Of all the pathogenic germs, bacteria, pus-forming cocci, the staphylococcus, pyogenes aureus, albus and citreus are the most frequent and the most dreaded.

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WHOLESALE AGENTS.

II. How do the bacteria reach the affected tissue? The cocci bacilli, fungi, etc., are found under certain conditions in the air. They are not, so to speak, hatched in the air, because the conditions favorable to their multiplication—warmth, moisture and nutrient material, as a rule, are not present. The breath, it has been discovered, does not contain those germs, nor do they escape into the air from the surface of fluids however rich in those micro-organisms. Water indirectly is a fruitful source of disease germs. Mixed with this fluid or floating on its surface in abundance, it is easy to understand how the ever varying change of level in lakes, ponds and pools of stagnant water, (some of which late in summer or in the early fall become completely dried up), *must* deposit a multitude of germs, only awaiting the pulverizing process and drying of heat and the moving atmosphere to become widely desseminated in all directions. Foul smelling air (bacteriologically) is often less to be dreaded, as containing fewer pathogenic germs than the air of streets and dwellings.

The well known experiment of Neumann may be mentioned with regard to the bacteriological condition of the air of a hospital. In the morning after the patients had left their beds and the wards were swept, the bacteria were found in greatest abundance.

A knowledge of the conditions mentioned and the consequent care and attention to the construction of the floors and walls of hospitals combined with perfect cleanliness, have to a certain extent removed the danger from infection in this way. The general surgeon, who can have all minutiæ of asepsis carried out, may feel fairly satisfied that his surgical procedure will be successful, in so far as the result may depend upon the fulfilment of those most important conditions.

With the eye surgeon, however, it is different. He can, in a measure, defend the fortress from enemies from without; but the traitors from within often render futile his best efforts.

As mentioned before, the conjunctival and especially the lachrymal sac always contain even in health a large assortment of germs. Most of those germs fortunately, however, are harmless, some not very virulent in character, but fairly constantly a few of the cocci group are present, a condition which is perhaps responsible for more disasters in eye surgery than all other causes combined. Of course it would be unfair to blame the intruders in the parts mentioned, as responsible for *all* the lost eyes by means of suppuration; but it must be admitted that this source is the most dangerous of all, from the fact that up to the present no mode of cleansing or washing has been found sufficient to entirely free the con-

junctival sac and parts around from those germs ; nor up to the present has any antiseptic been found which would be safe to leave in contact with the delicate corneal tissue sufficiently long to affect their destruction without risk of doing serious damage.

This condition does not obtain in general surgery. The field of operation is generally so situated and the parts of such a nature that the most thorough means may be used for complete sterilization of the part. Even (and this may be taken advantage of by the eye surgeon also) the air of the room may be rendered so pure that the result of the most expert bacteriological examination may be found negative. While this last precaution is by no means unimportant it might be said that the air is not considered a very frequent source of infection. Volkmann considers the hands the most dangerous agent in wound sepsis, having found as the result of experiment, that it is almost impossible to make the hands surgically clean. He is reported to have said "Auch auf einen Abtritte würde ich driest operieren wenn die Hände rein wären."

No doubt this is the reason of the recently adopted practice among the German and some American surgeons of wearing gloves while operating.

Notwithstanding the deficient attitude of this great German surgeon, with regard to operating in a vitiated atmosphere, I can imagine many cases when bacteriological examination of the air of the room for the more virulent of the cocci group would be very necessary and important, especially so if there were the slighest suspicion of the presence of the streptococcus of erysipelas.

Just before referring to the various processes of rendering the eye and surrounding parts, in so far as possible, aseptic, it may be remarked that there is a germ which not only escapes the preparatory manipulation of the eye surgeon, but has hitherto eluded the vigilance and the most painstaking and thorough scrubbing, washing and disinfection of the general surgeon. I refer to the organism designated in the books as the staphylococcus epidermidis albus.

This pale faced individual appears to give the surgeon a deal of trouble and annoyance. Frequently when everything has been going on apparently well for days, the patient complains of pains, severe fever and a complex of symptoms, pointing to some deep seated complication. On removing the dressings, the futility of his efforts to dislodge this germ becomes apparent, by the formation of a number of small abscesses around the sutures made use of to close the incision wounds. Although a pus producing germ, its virulence is not great and probably no disastrous results follow from its presence.

It is now quite a number of years since rigid antiseptic precautions have been adopted in eye surgery. Up to that time the surgeon had always to reckon upon a pretty constant percentage—3 or 4 per cent of losses from septic infection and purulency of the cornea. While the percentage of losses has notably decreased (1 per cent) since thorough asepsis has been observed, still quite a large number of eyes are lost from this cause. Why is this? I think the explanation is not far to seek. With proper aseptic precautions the number of cases of septic infection in eye surgery may be considered almost *nil*. The reason of this is, that modern aseptic surgery has removed nearly all external causes of infection. The hands, the instruments and everything in connection with the operation have been rendered perfectly aseptic.

Nails and Hand Sterilization.—Warm water, soap and nail brush.

The bacteria of the surface of the skin lie embedded in fat particles and dirt in the recesses of the cutanous surface.

Dipping the hands in the strongest germicide is *useless* so far as disinfection is concerned.

(1.) Warm water and soap, (1 minute.) Then dried and rubbed with a sterilized towel.

(2.) Under surface of nail in particular must receive attention.

(3.) The skin rubbed for one minute with 80 per cent alcohol.

(4.) Skin irrigated and rubbed with bichloride 1-2000. If very dirty rub the skin with ether before using the disinfectant.

A soap should be selected which has undergone *cooking* in manufacture. Soaps made from cold fat and lye should be avoided.

Wash conjunctival surface with 0.5 per cent sterilized solution of sodium chloride; it is said to be less irritating than plain water.

Evert the lids and wipe the surface of conjunctiva and site of operation with aseptic absorbent cotton which has been dipped in the salt solution. A cotton holder wound with a small piece of aseptic absorbent cotton is passed into the cul-de-sac and while the lid is held away from the eye ball the part is thoroughly wiped, afterwards thoroughly irrigated.

The most frequent cause of wound infection has thus been removed. In eye surgery, however, there is still to be taken into consideration pathogenic germs which remain in the conjunctival sac and lachrymal passage, liable to cause wound infection at any moment from time of corneal incision until complete healing of the wound. Hitherto no

antiseptic solution has yet been discovered, which can be retained with safety sufficiently long as to thoroughly remove or destroy all those sources of infection lurking in the folds of the conjunctival or lachrymal sac.

The germicidal power of the best known antiseptic may be summed up as follows, from which it may be seen in no case is the germ destruction instantaneous. It takes considerable time to destroy those virulent organisms, much longer than is safe to allow the solution to remain in the conjunctival sac.

Corrosive sublimate—1-1000 failed to destroy staphylococcus pyogenes and bacillus pyocyaneus (found in conjunction) in from 10 to 15 minutes. Tuberculous sputum was not rendered sterile after adding an equal amount of 1-1000 solution remaining for 24 hours.

This has been denied by Yersin who contends that he has destroyed tubercle bacilli in *one minute* by a solution of 1-1000 sublimate. He did the same with 5 per cent solution of carbolic acid. Those last experiments, however, were made upon bacilli in culture media. The germs in the sputum have shown themselves much more tenacious of life than the artificial culture.

Disinfection is not such a simple matter when the infective germs are protected by pus, or by the natural secretions of the tissues in which they are lodged. This difficulty is *still* greater when the germs are hidden away in folds of mucous membrane or in the mucous receptacle of the lachrymal sac.

Of course those difficulties do not apply to the *lids* which may be as thoroughly disinfected as the fields of operation in any other part of the body—the antiseptic may be retained in contact with the lids as long as necessary for the purpose.

While all cleansing and antiseptic measures may be considered useful in getting rid of the germs of the conjunctival sac, still the fact remains that in spite of the most thorough washing and the insillation of antiseptics to the utmost bounds of tolerance both in regard to strength of solution and duration of contact with the membrane, the germs have been found still to persist.

Gayet's experiments proved this in 178 cases. He washed out the conjunctival sac with 1-6000 sublimate solution; after the washing, a sterilized platinum wire was passed over the conjunctival surface and *then* dipped into a culture medium contained in test tubes. In spite of the washing, 139 tubes remained fertile, 39 sterile. Among the fertile germs the cocci of suppuration were proved by positive results in eleven inoculations.

In another series of 32 cases, the conjunctiva was washed out with a saturated solution of boric acid, and only *three* tubes remained sterile.

Then in 214 cases, in spite of washing out of the conjunctival sac, *172* contained microbes.

Franke made 139 experiments. In ten cases he washed the conjunctival sac with sublimate solution 1-5000. In 50 he wiped the upper and lower cul-de-sac with sterilized cotton dipped in solution of sublimate, and then washed the surface with the *same* solution. In 50 he washed out the conjunctival sac with aqua chlorate of the German Pharmacopœia, undiluted, which is more irritating than corrosive sublimate; although more antiseptic the irritating odor of chlorine water gives rise to cough, which is a serious objection to its use in eye surgery. In 10 he washed and wiped the conjunctiva with trichloride of sodium (1-2000,) and finally in 10 cases he washed out the sac with a bichloride solution (1-2500). In *none* of those cases could he be certain that the part so treated might be considered germ free.

The most satisfactory cases were those in which was combined the *wiping* of the surface with *irrigation*. The most unsatisfactory cases were those in which the surface was simply *irrigated* with a sublimate solution 1-5000; where microbes were demonstrated in the conjunctival sac before irrigation they were always to be found afterwards.

From those experiments it is evident, *very little can be expected* from bichloride solution. Besides Graefe has reported a permanent *marked opacity* of the cornea in nearly 5 per cent of his cases after the use of 1-5000 sublimate—a record sufficient, I think, to condemn its use in such cases. *Washing and wiping* the conjunctival sac with three-fifths of 1 per cent sterilized salt solution *daily for one week* is perhaps the best preparation of the eye for any important operative procedure.

Just a word with regard to instruments, as a result of Stroschein's experiments. He took 12 new Graefe's knifes, fresh from the instrument maker, and thrust the whole length of the blade into a culture medium, contained in tubes, and placed the *latter* in an incubator. Only 3 tubes remained germ free. The germs consisted of in the majority of sarcinæ lutea, next the potato bacillus (bacillus mesentericus vulgatus) and two other unknown kinds of micrococci. The *same knives*, 4 weeks later, *having been in the meantime used* (and of course previously disinfected) were *absolutely* sterile even after some of them had lain *for weeks* in their cases.

Of six Graefe's knives which had been used during six months on the cadaver and on pigs' eyes, only *one* was infected, and this one was found

to be *rusty*. Another test was made of 8 Graefe's knives, 5 keratomes and 6 cystotomes, which were cleansed by wiping with cotton wool and boiling in water; after having been in the operating case for 6 months *all were found sterile*. Stroschein found that of 5 Beer's knives only *two* remained sterile in operating case. This he believes to have been due to the dirt collected in the letters of the manufacturer's name and stamped on the shank. Instruments with *uneven* surfaces *always* require specially vigorous scrubbing. The same author found that Graefe's and Beer's knives *infected* with pus or pus cultures of staphylococcus pyogenes aureus and allowed to dry on the blade, could be made sterile by wiping the blades vigorously a number of times with cotton wool dipped in a mixture of equal parts of alcohol and ether with a few drops of ammnoia, afterwards wiped or rubbed with cotton wet with a 5 per cent solution of carbolic acid. The knives were finally nlaced in a sterilized solution of sodium chloride for the purpose of washing off the antiseptic ; knives thus treated were found to be *completely* sterile.

These solutions are said to damage the cutting edge of the knife. Ordinary Graefe's knives may be sterilized by dipping in 1 per cent solution of boiling soda and wiping carefully. Instruments with scratches and irregularities are safest boiled. Capsulatomes and discission knives are especially dangerous on account of being passed so deeply into the eye, and should therefore be disinfected beyond the possibility of danger. The danger from this source is great. Trousseau in 300 cases of extraction had not met a single case of suppuration while in discission he lost 6 per cent from this complication. The aqueous escaping in ordinary extraction washes to a certain extent the area of the incision.

On the other hand, in discission, if infecting matter is carried in with the needle it is shut in by the immediate closure of the wound.

It would take up much time to go into the clinical history of septic processes either following operation or accidental wounds. The time may be well spared as the facts unfortunately are painfully familiar to most of us ; happily, however, modern science has opened our eyes to a full appreciation of the dangers besetting our path, has taught us caution and foresight in operative surgery, and has established a rational standard of therapeutics in a very wide range of diseased processes and conditions.

In suppurative process in eye disease in general, antiseptic treatment has been markedly successful ; occurring in operative wounds the conditions are different and our main reliance is preventative measures. Imperfect as those conditions must necessarily be, from the considerations referred to, still the disasters from suppurations in eye surgery are happily becoming exceedingly rare, and we may cherish the hope that some antiseptic may yet be discovered, which while all potent in the complete destruction of germs, at the same time may be neither irritating nor dangerous to the corneal tissues.

SOME EXPERIENCES IN THE METHODS OF TREATING HERNIA BY OPERATION.*

By Francis J. Shepherd, M. D., M. R. C. S., Professor of Anatomy, McGill University, Montreal ; Senior Surgeon to the Montreal General Hospital.

It is now nearly twenty years since surgeons began to operate for the cure of hernia by the open method. Previously radical cures had been attempted in various ways, such as Wützer's and Wood's method by subcutaneous closure of the ring, and Spanton's method by invaginating the tissues into the ring after reduction of the hernia, and fixing them there. Both these methods required great skill and the results were not always the most favorable—in fact they never became popular, and outside the practice of the originators, were rarely employed. Other methods, by injection into the ring of certain substances such as solution of oak bark, etc., in the hope of causing sufficient inflammatory action to close the rings, had a certain reputation in the hands of a few men. In small herniæ the method was fairly successful. Most of these proceedings were secret and practiced by members of the profession who were not very far removed from charlatans.

With the introduction of antiseptics the subcutaneous method of treating surgical affections gradually became obsolete and the open method gained more and more favor every year. This change was slow, for old ideas die hard, but the "principle of getting in and finding out" gained ground steadily—Marcy of Boston, Banks of Liverpool, and Volkmann of Halle, began to operate by the open method in the early eighties. First, an incision was made over the tumour, next the sac was excised, with or without bringing together the pillars of the ring.

Soon after, more complicated methods were introduced, and finally, no one considered himself a surgeon unless he had invented a new operation, or a modification of an old one, for the radical cure of hernia. Everybody now rushed into operative measures for the cure of hernia and surgeons vied with each other as to the number of cases operated on and cures effected. Statistics of hundreds of cases were published

* Read before meeting of Canadian Medical Association, Ottawa, Sept. 12th., 1900.

and with few failures. Soon, however, there was somewhat of a reaction, it was found that after a time the so-called cures were not cures at all and relapses were frequently reported by rival operators.

Surgeons now turned their attention to improving methods of technique. It was found that sutures, months after being introduced, frequently came away; that sinuses often remained at the site of the drainage tube and that infection frequently got in by this channel. I remember one huge inguinal hernia I operated on about this time, had a sinus for over a year, which did not close until all the silk sutures came away. This case was a remarkable one and I think was published—the hernia was so large that the man could not put on his trousers. In operating I had the greatest difficulty in replacing the intestines in a cavity to which they had been strangers for years and it was only by the inversion of the patient this could be accomplished; after their return the abdomen was as tense as a drum. In this case the testicle of the affected side was removed and the conjoined tendon sutured to Poupart's ligament. Although a sinus persisted for so long, the man had a perfect cure and has worked hard at his trade (that of a blacksmith) ever since.

The methods of operation, as I said before, are almost as numerous as surgeons, certain general principles however underlie all operations—first, the necessity for excision or obliteration of the sac—second, closure of the canal—and third, union by first intention. Some also hold that an alteration in the direction of the canal is necessary.

On this side of the Atlantic Bassini's operation, or some modification of it, is the favorite. In children almost any operation will do, and a failure to cure is rarely seen. I have operated in many ways—first, isolating the sac, excising it, suturing the ring after the Banks-Czerny method. I have also tried Kocher's method of transplanting the sac, Ball's method of twisting it, Macewen's method of tucking it up, and many others.

For some years I have performed the radical cure of hernia by Bassini's method and have not regretted it. However, everything has not always been satisfactory, and although, to read about the operations now performed, one would imagine no complications ever occurred, still, in visiting the various hospitals in the States or abroad, these wonderful results are not always seen. It is not uncommon to see a little pus, some high temperature, or a sinus.* I might now mention

* The frequent occurrence of sinuses after operation induced McBurney to advocate an operation by open incision which he afterwards abandoned.

some of the mishaps which have occurred to me in some of my cases of hernia treated by operation:

I have found that by cutting the muscular part of the internal oblique and transversalis (that is the outer arched border), hæmorrhage frequently occurred during the vomiting from the anæsthetic and a little hematoma formed there which occasionally suppurated and sometimes a slough followed. Again, at the site of the drainage tube a sinus persisted and lasted till some sutures came away. Again, although the wound healed by first intention, after months a little abscess would appear, break, and leave a sinus through which would exude a suture. All these little accidents were annoying, and in speaking to various surgeons I find it has been their experience also. I endeavored to avoid such untoward results by improved technique.

I have used all kinds of sutures; silk, silk-worm gut, kangaroo tendon and aseptic and antiseptic catgut, etc., and have come to the conclusion that absorbable ones are the best and if the absorbable suture is an antiseptic one, it is to be preferred. The belief that a silk or wire suture is better when there is much tension and that it is necessary to keep the parts together indefinitely, is almost universal, yet, I dare venture to say that no ligature will hold parts together more than three or four weeks if there is tension. In such cases the sutures invariably cut themselves out and lie loose in the tissues if composed of unabsorbable material—hence a suture that will last about three weeks is all that is wanted.

For some two years now I have used nothing but strong chromicized antiseptic gut. Antiseptic catgut is preferable because we can never altogether be sure of perfect asepsis and a moderate amount of sepsis will be overcome by an antiseptic ligature where a simply aseptic one would break down.

I never wash out the wound, for water in the loose cellular tissue distends it and makes it less resisting to germs. It is better also to dissect out the sac with a knife than to tear it out with the fingers. I also now never cut the internal oblique and transversalis in transplanting the cord, but merely pull the edges aside. The ring is closed by uniting the conjoined tendon and edge of the rectus muscle with Poupart's ligament by two or three interrupted chromicized catgut sutures.

It is very important that the sutures should not be too tight or too close together, a neglect of these precautions may lead to sloughing due to the cutting off of the blood supply. The external oblique is united

over the cord by a continuous catgut suture and the skin wound is either brought together by a continuous subcutaneous or interrupted suture of horsehair. I never now use a drain and rarely apply any other dressing than iodoform paint and collodion.

I should have mentioned before that I now make the incision in the skin well above Poupart's ligament, so that after suturing the conjoined tendon to Poupart's ligament, I still have a sufficient amount of external abdominal oblique muscle left to suture to its upper portion. I also make the incision farther away from the pubes than formerly as these parts, not being covered with hair, are more easily sterilized and there is less fat there.

In all my cases I insist on rest in bed for three weeks after the operation and more if the patient can afford it. During the past summer I have had two cases of cæcal hernia with the appendix in the sac—in both cases the appendix was removed and in both cases there had been a history of previous attacks of appendicitis, evidence of disease of the appendix was present in each case.

For the last two years I have used rubber gloves in all operations on the abdomen and others where strict asepsis was essential, and I have been well satisfied. I think my results have been better in all operations since I have used them, I have had fewer stitch abscesses and altogether have operated with greater confidence.

During the last two years also I have not had a case of suppuration nor has a sinus resulted from the operation for radical cure. Among the cases operated on are included several severe umbilical herniæ. I do not mean to say that there will not be recurrence in some of the cases, but I do say the chance of relapse is much less when the wound heals by first intention.

The end results I have not given, nor have I tabulated my cases in this paper. I only want to give you the result of my experience of the methods of operating and the various sutures used in closing the ring. The cases that I have traced are as well to-day as possible and I have not now the disagreeable duty of treating a sinus for months which won't heal until the sinuses are discharged.

The mortality from the operation is practically nil in non-strangulated cases. Formerly, when all kinds of cases were operated on, deaths occurred in about five per cent. in the hands of able surgeons. At first, operations in children were not advised, except when strangulated, now these are our most successful cases.

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Clinical Reports.

THE OPERATIVE TREATMENT OF COMPLETE PROLAPSE OF THE UTERUS IN ELDERLY WOMEN*

By A. Lapthorn Smith, B. A., M. D., M R. C. S., Eng., Surgeon-in-Chief of the Samaritan Hospital for Women, Montreal.

The author comes to the following conclusions:

1st. That a woman suffering from procidentia or prolapse of the uterus out of the body, though not in much pain, is yet very miserable.

2nd. She is in some danger, owing to the cervix becoming ulcerated and the ulceration frequently becoming cancerous.

3rd. It is a mistake to think that she is too old to undergo an operation because she is forty-five or fifty, or even seventy-five years of age.

4th. Elderly women support the operations remarkably well; they only require from twenty to thirty minutes for their performance; and even if we knew that the patients were only going to live a year afterwards, it would be well worth while operating for the sake of the comfort it affords them.

5th. The operation of vaginal hysterectomy is especially easy and safe in these cases, having not more than one per cent. of mortality and probably not even that.

6th. Ventrofixation gives good results when the uterus is short, but fails when it is long. In some cases the vagina and bladder pull down and elongate the cervix after the fundus has been firmly attached to the abdominal wall.

7th. In either case whether hysterectomy or ventrofixation be employed, it should always be followed by an anterior and posterior colporrhaphy.

8th. These patients should remain in bed for six weeks after their operation, in order to give time for the new tissue to become strong.

*Abstract of paper read before the Canadian Medical Association, Sept, 13th, 1900.

CATARACT OPERATIONS.*

By E. A. KIRKPATRICK, M. D., C. M., Ophthalmic Surgeon to the Victoria General Hospital, Halifax.

During the past ten years I have on more than one occasion read a paper on cataract extraction, advocating the method of simple extraction without iridectomy.

The advantages of this operation I have explained as follows:

1st. No pain as the iris is not cut.

2nd. No haemorrhage as there is no iridectomy. This, of course, is a great advantage as free bleeding often takes place in all other forms of cataract operations, which not only delays the operation some minutes, but may even necessitate the abandoning of the completion of the operation for weeks.

3rd. It is a shorter operation.

4th. Vision is usually better than by any other operation.

5th. The cosmetic effect is perfect—a circular, central and movable pupil resulting.

6th. The wound is less likely to be occupied by small particles which excite irritation.

The disadvantages:

1st. It is a more difficult operation because of the liability of the iris to fall before the knife and the natural obstruction of the iris to the free passage of the cataract. To prevent the former the knife must be passed through the anterior chamber rapidly.

2nd. The remains of cortical matter are with greater difficulty expelled.

3rd. The necessity of a moderately dilated pupil, which is impossible to secure in some cases.

4th. Secondary operations are more difficult after cataract operations without iridectomy.

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* Read at meeting of Medical Society of Nova Scotia, Amherst, July 4th, 1900.

Since my appointment to the Victoria General Hospital I have performed half the cataract operations with iridectomy, and although successful results have been attained I still give preference to the operation without iridectomy.

The patient before you illustrates the two operations. The right eye was operated upon April 18th, the left April 30th, the right without iridectomy the left with iridectomy. The patient has normal vision in each eye.

The following table contains in a concise form all the facts relative to these operations and includes all the cataract operations performed by me at the hospital since my appointment and therefore not selected cases. With the exception of the first case the work was done last autumn and this spring. Note that two of the patients, No. 7 and No. 17, were eighty-two years of age. The healing in these cases was as good and as rapid as in any of the other cases :

(See following pages.)

No.	Name.	Age.	Nature of Cataract.	Date of Operation.	Complications.
1.	Mrs. B., Halifax.	67	Senile, hard, 1 year. Right eye.	Apr. 10th, 1899.	None.
2.	Frank M., Annapolis.	18	Traumatic, left eye.	Oct. 5th, 1899.	Lens dislocated into anterior chamber, fluid vitreous.
3.	John B., Newfoundland.	60	Senile, hard, 2 years.	Oct. 9th, 1899.	None.
4.	Wm. V., Newport.	66	Senile, hard, left eye.	Oct. 11th, 1899.	None.
5.	Mrs. L., Truro.	60	Traumatic, 15 years. Right eye.	Oct. 11th, 1899.	Eye was operated upon 12 years ago, many synechiæ.
6.	Miss M., Halifax.	70	Senile, hard, right.	Oct. 11th, 1899.	None.
7.	Mrs. H. Halifax.	82	Senile, hard, left.	Oct. 18th, 1899.	None.
8.	Wm. H., Linden.	68	Senile, hard, right.	Nov. 16th, 1899.	None.
9.	Mr. I., Hammond's Plains.	72	Senile, hard, right,	Nov. 22nd, 1899.	None.
10.	W. B., Truro.	32	Traumatic, hard, 17 years, left.	Jan. 10th, 1900.	3 Synechiæ.
11.	Wm. C., Halifax.	60	Senile, hard, right.	Apr. 16th, 1900.	None.
12.	M. G., Halifax.	47	Hard, left eye.	Apr. 16th, 1900.	None.
13.	Mrs. A., Halifax.	56	Senile, hard, right.	Apr. 18th, 1900.	None.
14.	Mrs. C., Springhill.	65	Senile, hard, right.	Apr. 29th, 1900.	None.
15.	Mrs. A., Halifax.	56	Senile, hard, left.	Apr. 30th, 1900.	None.
16.	Mrs. C., Springhill.	65	Senile, hard, left.	May 24th, 1900.	None.
17.	Mr. R., Dalhousie.	82	Senile, hard, right, 5 years.	June 5th, 1900.	None.

No.	Operation.	Healing Process.	Synechiæ	Duration of Treatment in Days	Secondary Operation.	Resulting Vision.*
1.	Cocaine, Simple extraction without Iridectomy.	Normal.	None	14	None.	20-25
2.	Cocaine. Iridectomy, loss of viterous	Normal.	Two.	29	None	20-120
3.	Cocaine. Simple extraction without Iridectomy.	Normal	None	29	None.	20 40
4.	Cocaine, Iridectomy.	Slow.	None.	60	Discission of capsule.	20-30
5.	Cocaine. Iridectomy, lens expelled with difficulty.	Erysipelas, 2nd day.	.....	40	.....	0
6.	Cocaine. Iridectomy.	Normal.	None.	28	None.	20 30
7.	Cocaine. Iridectomy.	Prolapse of iris.	None.	35	None.	20-30
8.	Cocaine. Iridectomy.	Normal.	None.	15	None.	20-40
9	Cocaine. Simple extraction without Iridectomy.	Normal.	None.	24	None.	20-30
10.	Cocaine. Without Iridectomy.	Normal.	None.	10	None.	20-80
11.	Cocaine. Iridectomy.	Normal	None.	18	Discission	20 20
12.	Cocaine. Iridectomy.	Lower lid became inverted. Severe iritis.	Three	40	Discission to be performed.	Counts fingers.
13.	Cocaine. Simple extraction without Iridectomy.	Normal.	None.	18	None.	20-20
14.	Cocaine. Simple extraction without Iridectomy.	Normal.	None.	18	None.	20 20
15.	Cocaine. Iridectomy.	Normal.	None.	15	None.	20-20
16.	Cocaine. Simple extraction without Iridectomy.	Normal.	None.	20	None.	20-80
17.	Cocaine. Simple extraction without Iridectomy.	Normal.	None.	9	None.	20-25

*20 20 indicates normal vision.

THE

MARITIME MEDICAL NEWS.

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Editorial.

THE RESPONSIBILITY OF WRITERS UPON MEDICAL TOPICS.

Many, many years ago the wisest man then known to earth gave utterance to an assertion which has been true of nearly every subsequent age: "Of making many books there is no end." The frequent visits received by the physician from representatives of publishing houses constantly serve to keep these words of Solomon fresh in mind, and as the book-shelves become more weighted, and the theories of the authors jostle one another confusedly in the reader's brain, he feelingly and emphatically completes the quotation: "And much study is a weariness of the flesh."

The production of medical books has to-day reached proportions which are appalling. Scarcely a school of medicine which does not boast of a goodly sprinkling of authors among its staff of teachers. Scarcely a man with a theory who has not included it in a volume designed to be a monument to his genius. And in even larger numbers, and with greater assertiveness, come the medical journals, which have of late multiplied with amazing rapidity. One almost stands aghast at the quantity of medical literature which is thrust upon him, and as its bulk increases at a rate out of all ratio to his ability to overtake the reading of it, he exclaims "for what good?"

Very often for no good, and very often, too, for positive harm. So usual is it for the average mortal to unconsciously accept as fact that which appears in print, and so common is it for one to regard with a peculiar veneration him who has written a book, that most men are largely made by what they read. The full realization of this places the medical author before us in a position of awful responsibility. The

doctrine which he teaches may prove a matter of life or death to countless numbers. It is impossible to conceive fully the power which a medical book may prove for good or for evil.

It is not so much, however, our desire to dwell upon the potencies of medical books, as to enter a protest against the recent tendency to the publication of so-called medical journals which are intended primarily as advertising sheets, and which hesitate at nothing which will tend to increase their income. Scores of such journals are being published to-day, the pages of which reek with the advertisements of all sorts of vile concoctions, and the "correspondence columns" of which are large and often filled with the ridiculous twaddle of self-supposed wiseacres who could not possibly think twice in one day. Such travesties upon medical journalism cannot fail to do a deal of harm. They are usually sent broadcast over the land, many being addressed to every physician whose name can be obtained, and are almost certain to reach some who will be influenced by the doctrines they promulgate.

The responsibility of the publishers of such journals is not less than that of the contributors thereto. But some measure of responsibility must also rest on the profession which permits them to exist. A systematic boycott of all the wares advertized in their pages would quickly lead to their discontinuance, and would remove a just cause for reproach.

Society Meetings.

CANADIAN MEDICAL ASSOCIATION.*

(Continued from last issne.)

The afternoon session of the second day drew a good audience, the attraction being Dr. F. S. Shattuck, of Harvard University, Boston. Looking at Dr. Shattuck you would not take him for an American. He has the cut of the swell London physician, but so soon as he opens his mouth, no one could doubt his nationality. Two words in the English language always locate the educated American—"Address," which they take particular pains to pronounce "*ad*-dress:" the other,—"Ordinarily," which they call "ordin-air-a-lee."

In opening the "Address in Medicine," Dr. Shattuck said that the advance in knowledge had brought about a sub-division of labour in every branch of industry—as a consequence, specialization has taken place in the science and art of medicine.

That anæsthesia has greatly enlarged the bounds of surgery: that twenty-five years ago there was not a pure surgeon in America. In this country the general practitioner is clinging to obstetrics for family practice. In some places the specialist in obstetrics will preside at the accouchment, and the family practitioner then take the case and oversee the puerperium. Dr. Shattuck then gave the honest practitioner some consolation by saying that to-day pure gynecology scarcely existed, and that pelvic tinkering is suffering from a rapid decline, the great bulk of major gynecology is nothing more than abdominal surgery, and should be attended to by the general surgeon. Dr. Shattuck took for his subject "Expansion in Medicine:" he must have looked over the *Ottawa Citizen* newspaper before selecting his subject, as in reading over the "ads" I was struck at once by the number of specialists in good standing at the capital. In speaking of belly-ache, which the doctor said was now a surgical disease, he had known a child with pneumonic pain referred to the right iliac region, being operated upon for appendicitis. According to Dr Shattuck, the heart is the only organ which remains in the exclusive province of the physician. Dermatologists according to

the doctor, had amply justified their existence. Dr. Shattuck's address was received most cordially, and the Association was delighted to hear this distinguished son of a distinguished father, and at the close voted him a most cordial vote of thanks.

"Dilatation and Prolapse of the Stomach" by Prof. Alexander McPhedran, was the next paper read. We expected a good paper from Dr. McPhedran and we were not disappointed. Most of us do not require an introduction to this able writer, as he is a frequent contributor to our medical literature of the day. Especially is the medical profession of the hour indebted to Prof. McPhedran for that very able article on "Diseases of the Liver," in *Sajous's Annual*, which the editor justly says in the preface to the fourth volume, "is a model of its kind."

The doctor said that the abdomen in this condition may be flat, prominent, or even retracted, that this condition rarely occurs alone, but is associated with prolapse of the abdominal organs. The doctor then gave the history and treatment of a case in his practice:—"Man aged 51, had been ailing for nearly three years. The stomach was below the umbilicus Treatment—massage of the abdomen, most thoroughly, and abdominal gymnastics. Diet, light and digestible: the only medicine was strychnine; the case made a good recovery. Another case was that of a woman 35 years of age. This woman had attacks of vomiting for two years, same treatment, with satisfactory results.

"Physical Training, its Range and Usefulness in Therapeutics," by Dr. B. E. McKenzie, surgeon to the Toronto Orthopedic Hospital. Dr. McKenzie is a well known contributor to Canadian medical journals and is an authority upon this subject. The doctor first gave an account of the methods employed by him in correcting deformities in Toronto and Grace General Hospitals. The paper was illustrated by lithographs showihg the marked improvement in spinal curvature from physical training. Iu hysteria and chorea the doctor has found physical training valuable.

The results of the election of the nomination committee were then announced by Dr. James Grant, Jr., Ottawa; and the four maritime men elected were Dr. Taylor, Charlottetown, Dr. T. D. Walker, St. John, Dr. A. J. Mader, Halifax, and Dr. W. S. Muir, Truro. The names of the whole committee were then read by the Secretary and the members were asked to meet and to report at the first session on Friday morning.

Prof. James Stewart, of McGill College, then read a very able paper upon "Cerebral Abscess" and reported two cases of abscess of the brain, situated in the temporo-sphenoidal lobe. In both cases there was a most unusual aphasia; the patients were unable to name objects within their sight. In one case the abscess followed an attack of grippe and abscess of the middle ear. Six weeks later the case was operated upon by Prof. James Bell, after the abscess had been localized by this peculiar aphasia. The other case was much like the first; both patients died. The latter was not operated upon but at the post-mortem examination they found the same condition of affairs.

The President-elect, Dr. H. H. Chown, of Winnipeg, then made his debut and reported two cases of "Gangrene of the Leg Following Typhoid Fever." In the first case the patient had all the cardinal symptoms of typhoid fever. On the eleventh day of the fever, gangrene set in, involving the lower third of the leg on the outer side and lower half of the inner. Amputation was done above the knee. After a relapse and a hæmorrhage of the bowels, the patient recovered. In the second case the leg was amputated for gangrene which began on the 9th day of the fever, and prompt union took place.

Pictou County gets the credit for producing more clergymen to the square foot than any other county in our province; this is said to be due to oatmeal and the shorter catechism. This diet must also be conducive of good men in other professions, as another Pictou man, Dr. R. D. Rudolf, of Toronto University, contributed a most interesting article "Notes on Atropine." This original and scientific paper was beautifully illustrated by means of a chart showing the action of the drug on animals. The doctor demonstrated the fact that atropine raises blood pressure to a marked degree by stimulating the heart directly; that we should never give over 1-100th of a grain except when using it as an antidote. He dwelt for some time upon the use of atropine before anæsthesia when you feared danger.

Prof. Blackader, of McGill University, congratulated Dr. Rudolf upon his paper and hoped he would continue his studies upon this subject. He considered strychnine by far the most powerful heart tonic and threw some doubt as to atropine being a direct stimulant to the heart muscles.

The afternoon session was brought to a close in one of the smaller rooms where the Association was treated to the most beautiful lantern demonstration that it has been our lot to see. Dr. George H. Fox, of

New York, has placed our Association very deeply in his debt by the trouble he has taken with this "Lantern Slide Demonstration of Skin Diseases." It was worth going all the way to Ottawa to see. Most of the lesions shown were of syphilitic origin, and as they appeared on the canvas, Dr. Fox gave the history and treatment of each case. The "pictures" in many instances were so true to life that you could distinguish the different hues of the lesions. I will not go any farther into this subject, but leave you to judge for yourselves as Dr. Fox has kindly consented to come to Halifax next July and give the members of the Maritime Medical Association a treat that they will never forget.

The dinner tendered to the Canadian Medical Association by the medical men of Ottawa at "The Russell" occupied all the evening and part of the night of the second day. It was a brilliant affair. The President, Dr. R. W. Powell, of Ottawa occupied the chair. On his right were Drs. Edmund Owen, F. S. Shattuck and T. G. Roddick; on his left the Reverend President of the Ottawa University, Dr George H. Fox and the mayor.

The following is the list of toasts as far as I can recollect.

THE QUEEN.

The Governor-General.

The Parliament of Canada.

The Corporation of Ottawa.

The Canadian Medical Association.

The British Medical Association.

The American Medical Association.

The Army Medical Service.

The Medical Press.

Our Guests.

On Friday morning the first business before the meeting was the report of the nominating committee. Dr. W. S. Muir, the chairman, then handed in the following report, which was received and adopted.

Next place of meeting Winnipeg, Manitoba.

President, Dr. H. H. Chown, Winnipeg.

Vice-President for P. E. I., Dr. H. D. Johnson.

" " " N. S., Dr. A. I. Mader.

" " " N. B., Dr. T. D. Walker.

" " " Quebec, Dr. A. Lapthorn Smith.

" " " Ontario, Dr. A. A. McDonald.

" " " N. W. Territories, Dr. J. D. Lafferty.

" " " B. C., Dr. S. I. Tunstall.

Treasurer, H. B. Small, Ottawa.

Secretary, F. N. G. Starr, Toronto.

The Rev. Dr. Eby then presented the following report from the committee of the society appointed to form a Dominion Anti-Consumption League: that a Canadian league should be formed which shall aim at the unification of the provinces and territories, thus to establish provincial organizations and to carry on the agitation until public opinion becomes strong enough to move municipalities, insurance companies, benefit societies, churches, etc., to take combined action with the help of local governments to establish rural sanitaria: the league to be known as the "Canada Association for the Prevention of Consumption and other Forms of Tuberculosis."

The Governor-General is Honorary President.

President, Sir James Grant, Ottawa.

Vice-Presidents.		Nova Scotia, Dr. A. P. Reid.
"	"	P. E. I. Island, Judge Warburton.
"	"	N. B., Secretary of Board of Health.
"	"	Quebec, Sir William Hingston.
"	"	Ontario. Dr. James Thorburn.
"	"	Manitoba, Dr. H. H. Chown.
"	"	N. W. T., Dr. Lafferty.
"	"	B. C., Dr. S. Tunstall.
"	"	Yukon, Dr. I. H. Brown.

General Secretary, Rev. Dr. C. S. Eby, Toronto.

Treasurer, Mr. I. M. Courtenay, Ottawa.

Sir William Hingston, of Montreal, and Dr. F. W. Campbell, Montreal, were appointed to the Board of Governors of the Victorian Order of Nurses.

Dr. A. V. Moore, of Brockville, Ont., then presented the report of the committee appointed by the society to report upon the advisability of forming a "Medical Defence Association." This committee recommended the formation of such an association, appointing Dr. Moore, chairman, and a secretary in each province in the Dominion whose duty it is to gather information in the meantime, so that the committee can report at the next annual meeting. Dr. W. S. Muir is the Nova Scotian appointed to this committee, and this matter will be brought before the Nova Scotia and Maritime Medical Society meetings next year.

Dr. G. H. Burnham, Toronto, reported two cases of "Diseases of the Eyes," successfully treated by the combined methods of mercury and iodide of potash internally, and pilocarpine hypodermically.

"Mental Sanitation," by Dr. Bruce Smith, Brockville asylum. According to Dr. Smith the number of insane in Canada is increasing beyond the proportional increase in population. The study of the causes and course of insanity suggested that to secure prevention, efforts must be made to lessen the demand on, or to strengthen the resisting power of the brain. Modern investigations were more and more pointing to physical basis as the origin for many of the symptoms and forms of mental disease and the inter-dependence of mental vigor upon bodily health has become a problem of most vital importance in the study of insanity. The doctor went on to say that there is probably no other disease in which the probability of development may be so often and so certainly foretold by a study of the ancestry. The public should be taught to look upon alliance with ancestral lines, tainted by insanity, not simply as discreditable or unworthy, but as fraught with danger. Again the doctor said, that the day may dawn, when as a nation, we shall give as much attention in securing a healthy race of children as we now do to the breeding of horses. Another method suggested for the prevention of insanity was by more attention being paid to make the domestic life of farmers less monotonous. If the doctor had said farmers' wives he would have struck the nail on the head.

Dr. Small, treasurer, reported the receipts for the year at $309.80, and a balance on hand of $240.65.

Votes of thanks were extended to the President, Treasurer and General Secretary.

Before closing these notes let me call your attention to the fact that next year the annual meeting of this Association will be held in Winnipeg, Manitoba, during the last week of August, and that every one should make an effort to attend. The Canadian Pacific Railway will, it is said, provide private cars for the members, and a special low rate will be offered to members and their families who wish to attend the meeting and go to the coast afterwards. The Winnipegers will treat us right royally as they did once before in 1889, when on the way to the Banff meeting they made us their guests for twenty-four hours and dined and wined us like lords.

W. S. Muir,

Truro.

NOVA SCOTIA BRANCH BRITISH MEDICAL ASSOCIATION.

The annual meeting of the Nova Scotia Branch British Medical Association was held at the Halifax hotel on the evening of Oct. 17th, Dr. E. A. Kirkpatrick, President, in the chair.

The annual report of the council for the session 1899-1900 was read by the secretary as follows:

To the members of the N. S. Branch British Medical Association.

GENTLEMEN,

The past session of the Branch has surpassed in some ways any previous one.

The number of meetings held, in spite of the distraction caused by the excitement of the contingent last winter, was 11, the same number as the preceding year. The average number of members attending each meeting was over 16, while compared with 15 the previous session. The number of members taking part in meetings was 40 compared with 32 the previous year.

The work done during the year was of sufficient quantity and high quality.

The long and severe illness of the President necessitated his absence from some meetings but the Vice-President was always present to fill his place.

The government has responded to the petition of the association re tuberculosis by passing legislation providing for the construction and maintenance of a sanatorium.

Your council held six meetings—at which five new members were elected to the branch.

Appended is list of attendance of members of Branch at meetiugs during session 1899-1900 and of members of council at council meeting.

All of which is respectfully submitted.

C. DICKIE MURRAY, *Hon. Sec.*

The election of officers was then proceeded with and resulted as follows:

President.—Dr. G. C. Jones.

Vice-President.—Dr. Thomas Walsh.

Treasurer.—Dr. M. A. B. Smith.

Secretary.—Dr. C. D. Murray.

Council.—Drs. Ross, Kirkpatrick, Murphy, Walsh, Trenaman, Major Peeke and Dr. G. M. Campbell.

Representative on General Council.—Surgeon-Gen. O'Dwyer.

Obituary.

Arthur Wynne Foot, M. D., F. R. C. S. I., a noted Dublin physician died on the first of last month in the 63rd year of his age. His contributions to medical literature were numerous and valuable and even at the time of his death was contemplating a paper on medical humours displayed by newspaper cuttings. His powers as a teacher in medicine at the Royal College of Surgeons, Dublin, are known to the hundreds of practitioners who were fortunate enough to have come within the circle of his magnetic influence. His lectures were elaborately prepared while his clinical teaching was an intellectual treat. In 1892 he became afflicted with locomotor ataxia, but not until some time after when a cerebral hæmorrhage ensued did he relinquish all his work except the chair of medicine where he was helped to and from the lecture room by his loving pupils. A second hæmorrhage nearly carried him away in the following winter, but again he recovered and retained his mental vigor until the 1st of September last, when a third hæmorrhage proved fatal in a few hours.

Sir William Stokes, M. D., F. R. C. S. I., Surgeon to the Queen in Ireland, who was appointed Consulting Surgeon to the forces in South Africa, succumbed to an attack of pleurisy at Pietermaritzburg on August 18th. There are no details as to the causes which led up to his death, but probably exposure acting on a constitution never very robust, and at the time weakened by overwork, was accountable for the fatal issue. He was born in 1839 and was a son of William Stokes, the illustrious physician whose works on diseases of the heart and lungs are still read by every educated physician. William Stokes contributed largely to surgical literature, having written at least one hundred standard papers. Of his many honors the one which he valued the most highly was that of Surgeon in Ordinary to the Queen in Ireland, to which he was appointed in 1892. He was not only an orator but one of the most cultured members of the profession.

Dr. Alfred Stillé died at Philadelphia on September 24th in the 87th year of his age. In 1864 he was elected professor of medicine in in the University of Pennsylvania and upon his resignation some years ago was elected emeritus professor. He was one of the founnders of the American Medical Association and in several societies at different times held important offices. Dr. Stillé was the author of "Elements of General Pathology," and of "Materia Medica and Therapeutics."

Dr. M. A. McDonald.—The death occurred at the Halifax Infirmary, on Oct. 21st, of Dr. Michael A. McDonald, of Sydney. The diseased was born at River Dennis, received his classical education at St. Francis Xavier College, Antigonish, completed his medical studies at New York, and began practice at Sydney. For a number of years Dr. McDonald was collector of inland revenue at that town. He was a brother of Senator McDonald, of Glace Bay. The cause of death was fatty degeneration of the heart.

Matters Personal and Impersonal.

Dr. A. Halliday, of Shubenacadie, recently sailed for Glasgow, where he intends taking up post-graduate work for six months. During Dr. Halliday's absence, Dr. Salter, formerly clinical clerk at the Victoria General Hospital, will look after his practice.

Dr. H. M. Jacques, of Canning, was married on September 26th, at the Baptist Church, Kentville, to Miss Lizzie Burgess, of Sheffield Mills.

Dr. Clarence Morris, of Windsor, and Miss Jean Smith, daughter of Mr. John M. Smith, of Bennet Smith & Son, were married at Windsor, on the 3rd inst.

Dr. R. F. O'Brien, of Maitland, was united in marriage on the 17th inst., to Miss Susie W. Dow, daughter of James Dow, Esq., of this city. The NEWS extends its best wishes and congratulations to each of the couples.

The plague still exists in Glasgow, up to the first of this month there had been seven deaths and twenty-one cases were under treatment.

Books of the Month.

THE LADIES' HOME JOURNAL for October, published by the Curtis Publishing Co., Philadelphia. The last copy of this well-known magazine contains its usual pages of very interesting reading. What ought to interest particularly the average young man whether belonging to the medical profession or otherwise is an excellent resumé of "The Prevailing Etiquette for Young Men." Short, bright articles, viz: "Josiah and I Go A-Visitin'." "Humor of the Chinese Language" and "Criticising the Clothes of the Minister's Family," are a few that will appeal to the mind of the average reader. The illustrations are excellent, the front page of cover in particular being very creditable to the designer.

THE HYGIENE OF TRANSMISSIBLE DISEASES.—Their Causation, Modes of Dissemination and Methods of Prevention. By A. C. Abbott, M. D., Professor of Hygiene and Director of the Laboratory of Hygiene, University of Pennsylvania. Price, $2.00 net.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE.—By James M. Anders, M. D., L L. D. Containing 1929 pages with 83 illustrations, many of which are in colors. Fourth revised edition. Price: cloth, $5.50 net; sheep or half morocco, $6.50 net.

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In the gastro-intestinal diseases of children, it also supplies both the food and the remedy, thereby fulfilling the same indications which exist in Typhoid Fever.

Each tablespoonful contains two minims of pure Beechwood Creosote and one minim of Guaiacol.

DOSE.—One to two tablespoonfuls from three to six times a day.

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The use of Abbey's Effervescent Salt is growing daily, and is now regarded as a standard preparation, put up in the most high-class manner, and sold through druggists only.

The preparation is manufactured in the most perfectly appointed laboratory in America, under the supervision of expert chemists, and is in every way guaranteed to meet the many requirements for which its properties render it useful.

Notes.

Sanmetto for Irritability of the Genito-Urinary Tract, either Specific or Non-Specific.—It affords me pleasure to attest my appreciation of sanmetto. I have used it quite extensively for the last eight years, and the results have justified all the good things I had read about it. I use it in both males and females. For irritability of the genito-urinary tract, either specific or non-specific, my results are good following the exhibition of sanmetto. I shall continne its use.

Defiance, Ohio. J. D. Westrick, M. D.
1888 Toledo Med. Col.; Mem. Am. Med. Asso., Tri-State Med. Soc., Ohio State Med. Soc., and Pres. Defiance Co. (Ohio) Med. Soc.

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Another advantage of codeine over morphine, one of special value in bronchial catarrh, is that the patients not only cough less, but also expectorate more easily than after morphine. The cough-dispelling power of codeine is such as to make it indispensable in phthisical patients and a point of great importance in these cases is that it does not impair the appetite or digestion, and can therefore be used uninterruptedly for months.

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Throughout the pages of materia medica and therapeutics no preparations are so lauded as a general tonic as those of iron. It has been shown by thorough investigation that the tissues and fluids of the human body contain normally a certain amount of iron; not a large quantity, but evidently very essential to the health and well-being of every individual.

The intimate association of iron with manganese throughout the whole of nature is no less demonstrated in the human body than in the vast mineral formations of the earth. They are found together in the blood, in the bile and in the hair. The proportion of manganese to iron in red blood corpuscles is one in twenty, and it appears to be a very important associate and aid to iron in the human economy.

We have described in the Pharmacopœia an almost endless number and yet the physician rarely employs more than two or three of these. The few that are of practical importance are often objectionable on account of their astringency and tendency to irritate the stomach, constipate the bowels, or injure the teeth.

It is generally conceded that both iron and manganese are absorbed as albuminates, and when they are carried through a process which prepares them for easy and ready absorption and assimilation, they are necessarily more effective, as the stomach is relieved of work which in many cases it is unable to accomplish.

Gude's Pepto-Mangan is an unusually happy combination of iron and manganese in such a way as to be easy of absorption and free from the objectionable effects of other preparations of iron. In its preparation a large amount of egg albumen is used to convert the iron and manganese into a form easy of absorption: there is also sufficient pepsin employed to make the preparation an aid to the digestion, whereas many of the other preparations interfere with this all-important function. The Tr. chloride of iron, which is the most generally used of all preparations in the Pharmacopœia, is very astringent: it can rarely be tolerated by a weak stomach; it discolors and injures the teeth, and always constipates the bowels.

Gude's Pepto-Mangan is free of all these objectionable features, and has the advantage of containing manganese in combination with the iron, which is decidedly synergistic to the action of the latter. This preparation is useful in all forms of anæmia and chlorosis, and is especially indicated in anæmic and chlorotic girls who suffer with dysmenorrhœa and amenorrhœa, and is the most useful of all preparations in cases where iron and manganese are indicated.

In nervous conditions associated with anæmia no preparation can be found of more service than this in combination with strychnia sulphate. It is given in dessert to tablespoonful doses, with or immediately after meals, and may be given in water, sweet milk, or preferably, in most cases, sherry wine. This preparation, as in case with all general tonics, should be given from four to six weeks before any marked improvement is expected.—Editorial *Alabama Medical and Surgical Age*.

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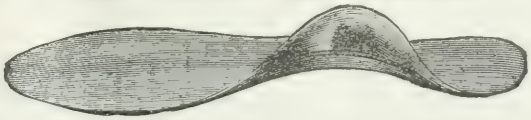

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